

Date:
User:Wednesday, 4/5/2006 3:31:19 PM
Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: MID TUBE ASSEMBLY
Job Number	: 26573		
Estimate Number	: 10469		
P.O. Number	: N/A	Part Number	: D3391023
This Issue	: 4/5/2006	S.O. No.	: N/A
Prsht Rev.	: NC	Drawing Number	: D3391 REV D
First Issue	: N/A	Project Number	: N/A
Previous Run	: 26572	Drawing Revision	: D
		Material	: N/A
		Due Date	: 4/24/2006
Written By	: <i>See comment below</i>	Qty:	1 Um: Each
Checked & Approved By	: <i>06.04.06</i>		
Comment	: Est. A 05.10.20 New Issue KJ/EC		
	: Est. B 06.02.10 ECN773 dwg rev.D EC		

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description:

1.0 D25001100 Skidtube Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

SKIDTUBE EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-100	Extrusion	B 24593 IT 06-04-07

2.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut tube to finish length as per Dwg D3391 IT 06-04-07

2-Identify as D3391-023 IT 06-04-07

3-Drill pilot holes using DT8796 as per Dwg D3391

4-Open float bag holes to Ø0.250" as per Dwg D3391 using DT8796D visual aid Jig Pm' 06-04-09

5-C'sink float bag holes as per Dwg D3391 Pm' 06-04-09

6-Open remaining holes to Ø0.375" Pm' 06-04-09

7-Remove .030" from Fwd indexing Ridge as per Dwg D3391 Pm' 06-04-09

8-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391 Pm' 06-04-09

9-Deburr Pm' 06-04-09

10-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.208" holes with paint marker

11-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.208" (14 holes) as per Dwg D3391

12-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.250" and c'sink (20 holes) as per Dwg D3391

13-Open .375" holes to .438"

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/5/2006 3:31:20 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 26573

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

114-Deburr and blow out all chips from inside tube

Pm' 06-04-09 ①

3.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

James ①

4.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

Pm' 06-04-26 ①

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BE 06-05-24 ①

6.0

D33891-

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEB

Pick:

Qty

Part Number

Description

Batch

1

D3389-1

Web

326438

A/R

Sikaflex-241/-291

M100701

Sikaflex expire date:

06-11-01

Pm' 06-05-24 ①

Start: *06-05-24* Time: *1:30*

Finish: *06-05-29* Time: *1:00*

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)

Pm' 06-05-29 ①

8.0

NAS1330C3KB116

Insert



Comment: Qty.: 20.0000 Each(s)/Unit Total: 20.0000 Each(s)

Insert

Pick:

Qty

Part Number

Description

Batch

20

NAS1330C3KB116

Insert

M19349

DC 06/06/14 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: PS Date: 06/06/29
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 4/5/2006 3:31:20 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 26573

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

NAS1330C3KB166



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)

RivnuT

Pick:

Qty Part Number

Description

Batch

10

NAS1330C3KB166

Insert

M100732

DL 06/06/14

(1)

10.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Install inserts as per Dwg D3391

DL 06/06/14 (1)

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect each insert using DT8821

M BB 15 (1)

12.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

Use paint screws to mask inserts.

Q.m 06-06-14 (1)

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DL 06/06/14 (1)

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

N/A R/S 28

15.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

DL 06/06/29 (1)
L 06-06-28

Job Completion



Dart Aerospace Ltd

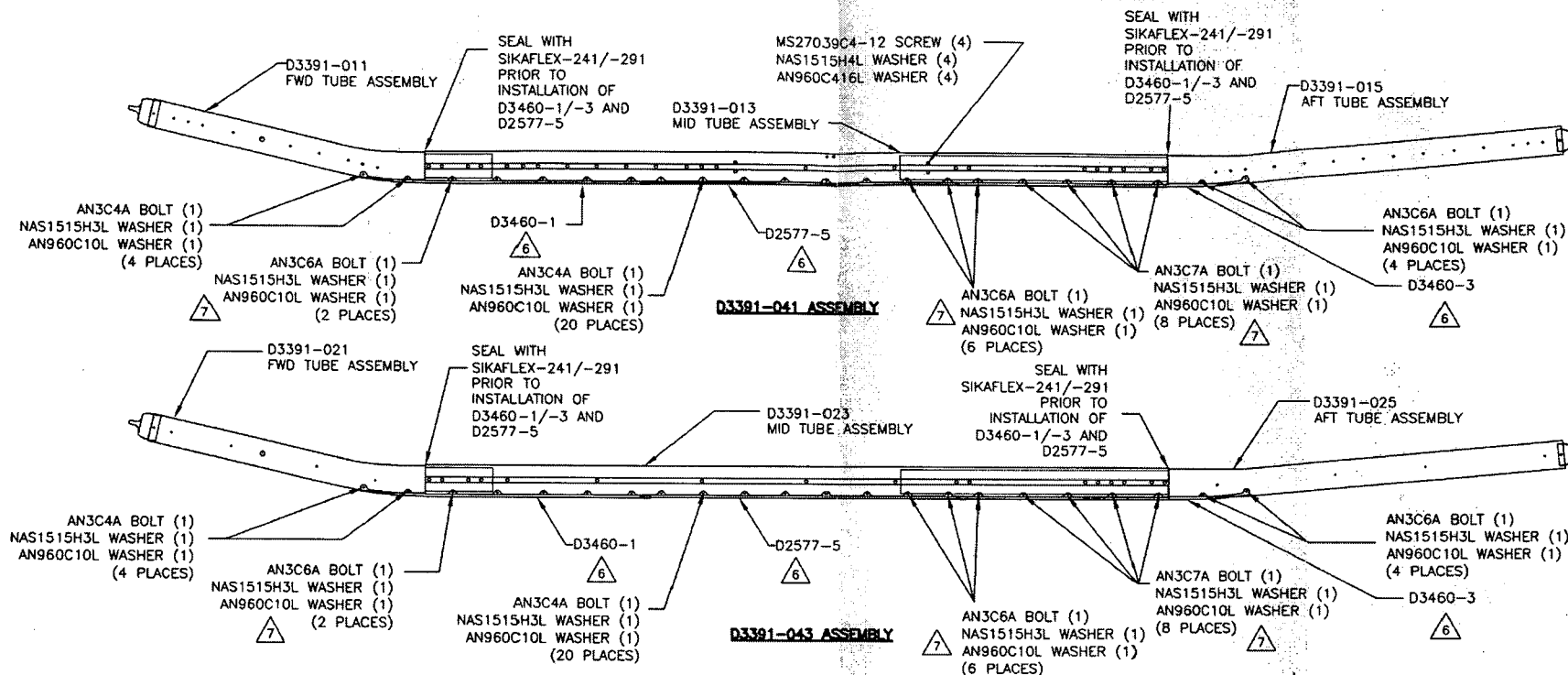
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



GENERAL NOTES

- 1) ALL DIMENSIONS ARE IN INCHES
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 'E' SIZE HOLES (#0.250-#0.257) FOR WEARSHOE INSERTS. C'SINK #0.391/#0.425 x 100" AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) APPLY A LAYER OF SIKAFLEX -241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES
- 7) DO NOT TORQUE, HAND TIGHTEN ONLY

△

RELEASED

06.01.27

D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

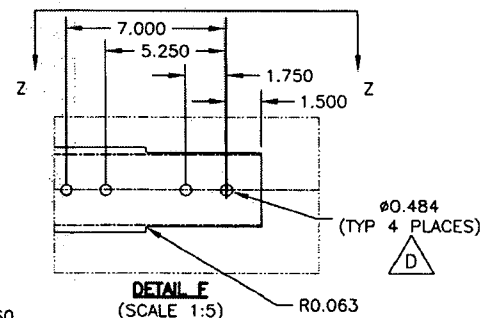
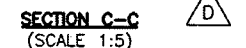
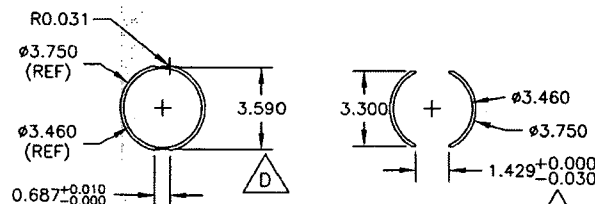
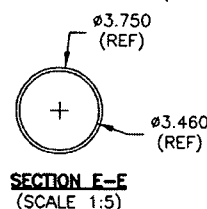
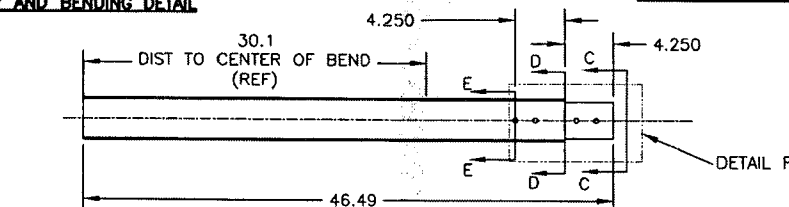
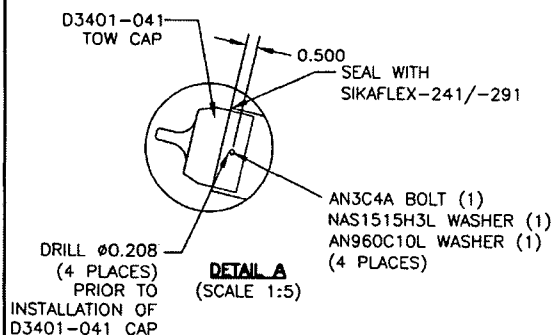
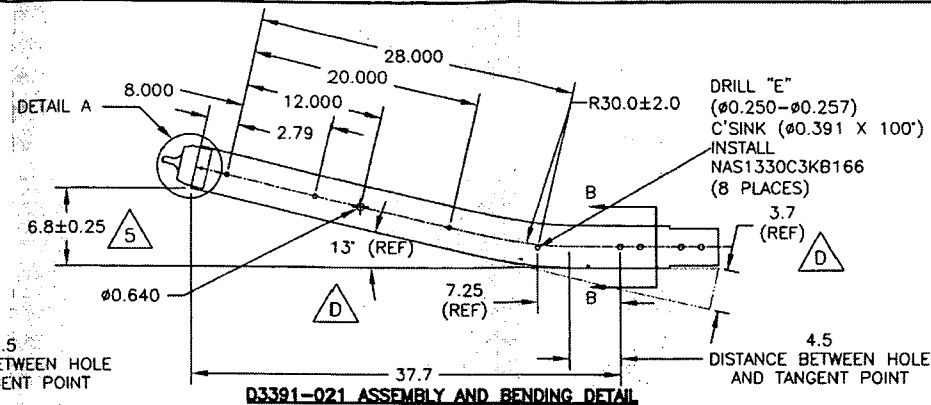
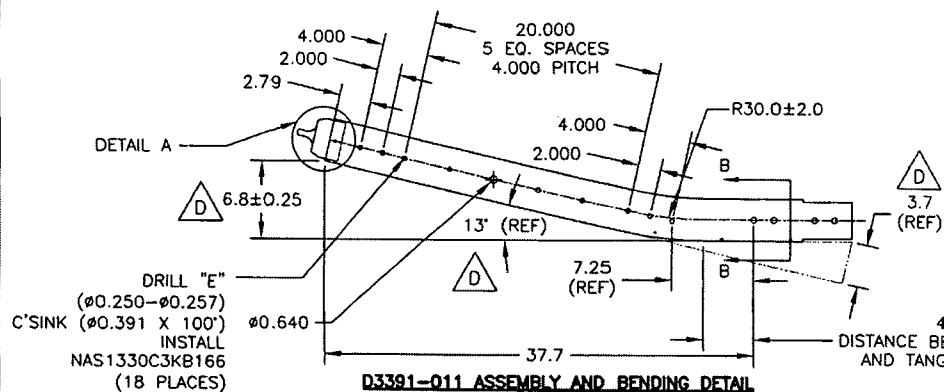
QTY - 041	QTY - 043	PART NUMBER	DESCRIPTION
X	X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
		D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
24	24	AN3C4A	BOLT
12	12	AN3C6A	BOLT
8	8	AN3C7A	BOLT
44	44	NAS1515H3L	WASHER
44	44	AN960C10L	WASHER
4		MS27039C4-12	SCREW
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
1	1	D2577-5	WEARSHOE
1	1	D3460-1	WEARSHOE
1	1	D3460-3	WEARSHOE

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
26573
SHOP COPY
RETURN TO
ENGINEERING

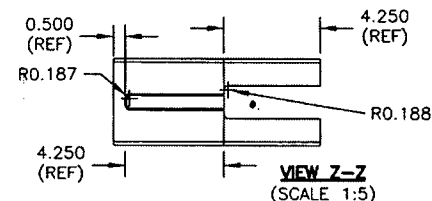
COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

DESIGN	PH	DRAWN BY	PH	DART AEROSPACE USA, INC.
CHECKED	PH	APPROVED	PH	PORT HADLOCK, WA
DATE	06.01.23	DRAWING NO.	D3391	REV. D
		TITLE	412 FLOAT SKIDTUBE	SHEET 1 OF 5
		SCALE	NTS	



RELEASED
06-01-27

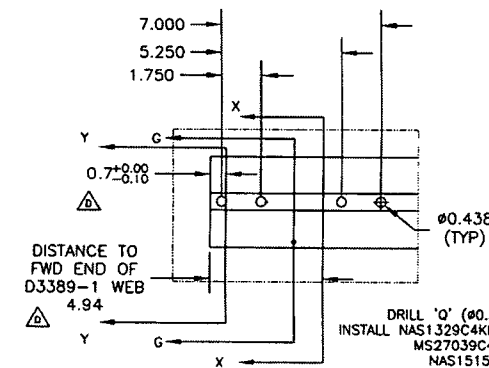
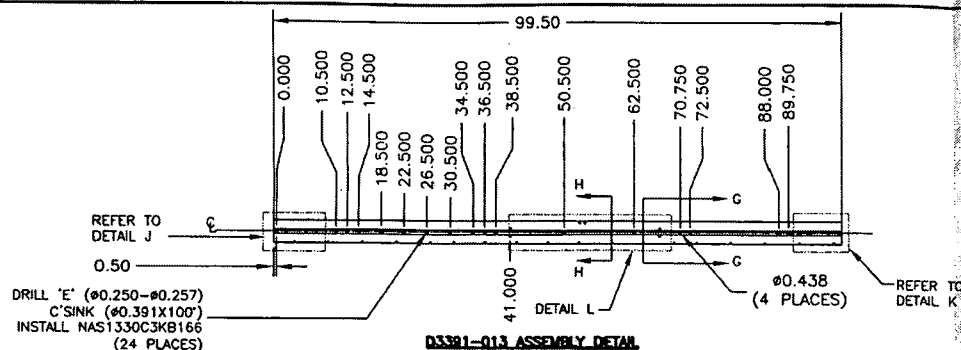


D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

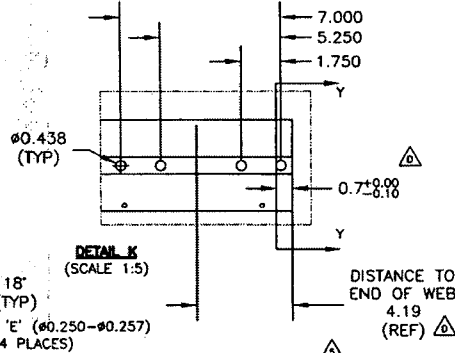
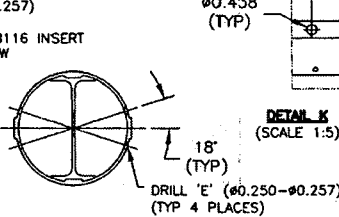
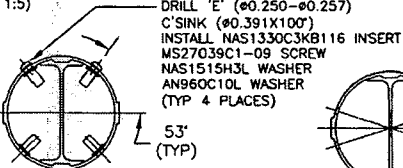
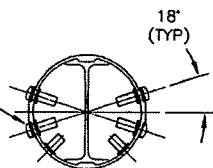
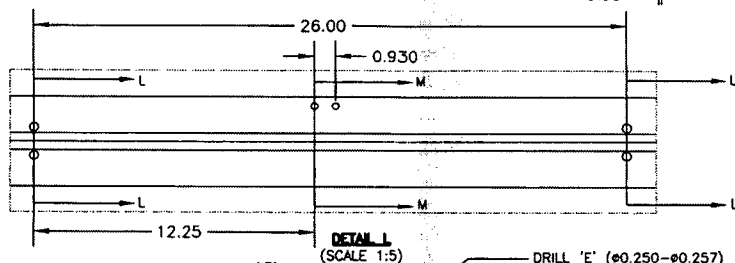
QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
4	4	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
4	4	AN960C10L	WASHER
24	14	NAS1330C3KB166	INSERT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
26573

COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.		DESIGN PH	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, MA	
CHECKED	APPROVED	DRAWING NO. D3391		REV. D	SHEET 2 OF 5
DATE 06.01.23	TITLE 412 FLOAT SKIDTUBE		SCALE 1:10		



DRILL 'O' (#0.332-#0.338)
INSTALL NAS1329C4KB140 INSERT
MS27039C4-08 SCREW
NAS1515H4L WASHER
AN960C416L WASHER
(TYP 4 PLACES)

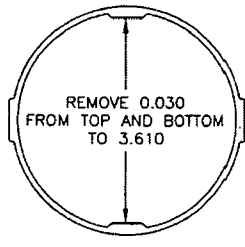


RELEASED
06.01.27

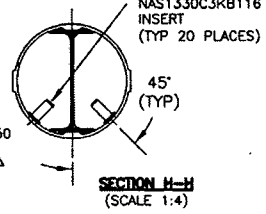
D3391-013/-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 013	QTY - 023	PART NUMBER	DESCRIPTION
X	X	D3391-013	MID TUBE ASSEMBLY
		D3391-023	MID TUBE ASSEMBLY
1	1	D2500-1-100	EXTRUSION
1	1	D3389-1	WEB
24	20	NAS1330C3KB116	INSERT
24	10	NAS1330C3KB166	INSERT
4		NAS1329C4KB140	INSERT
4		NAS1515H3L	WASHER
4		AN960C10L	WASHER
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
4		MS27039C1-09	SCREW
4		MS27039C4-08	SCREW

SECTION I-I (SCALE 1:4)



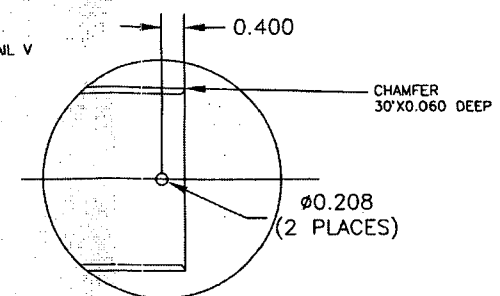
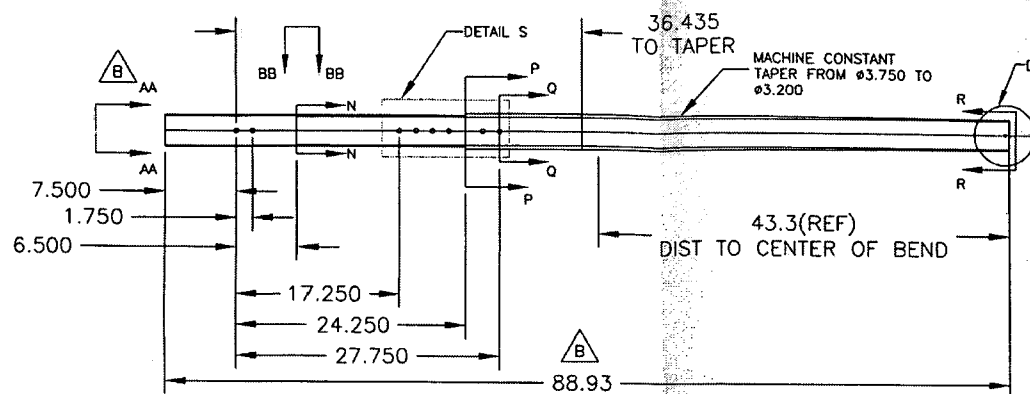
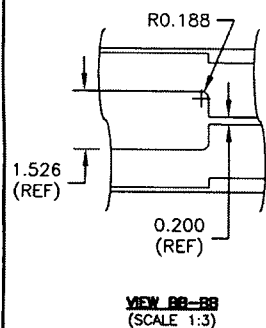
REMOVE 0.225 FROM TOP AND BOTTOM TO 3.800 (0.7 FROM BOTH ENDS)



DESIGN PH		DRAWN BY PH		DART DART AEROSPACE USA, INC.	
CHECKED	APPROVED	DRAWING NO. D3391	REV. D		
DATE 06.01.23	TITLE 412 FLOAT SKIDTUBE	SHEET 3 OF 5			
		SCALE 1:20			

D3391-013/-023 MID TUBE ASSEMBLY
1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-2417-291 PER QSI 015

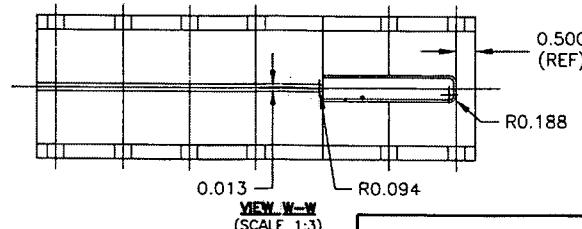
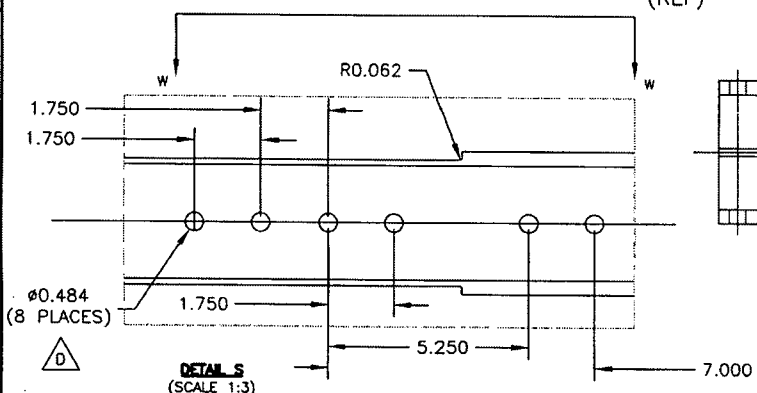
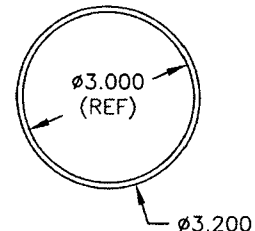
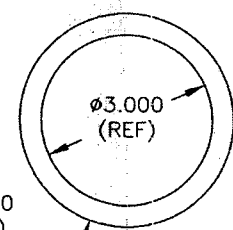
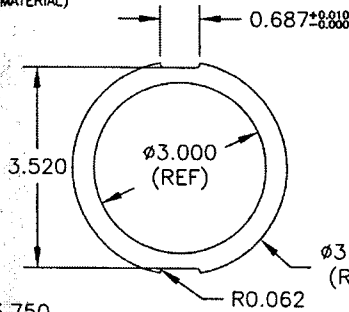
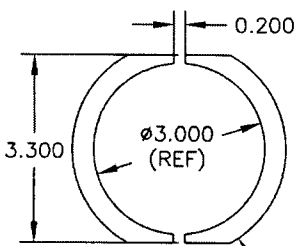
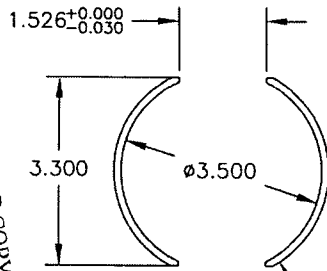
WORK ORDER
265723
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE



D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)

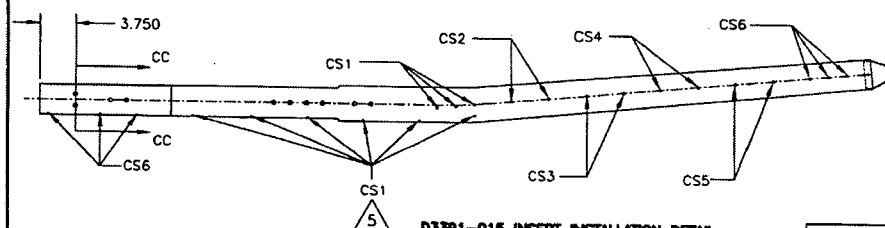
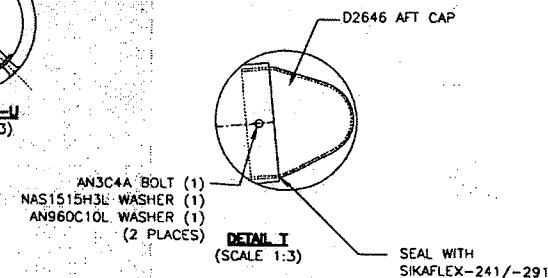
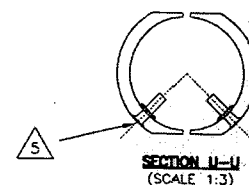
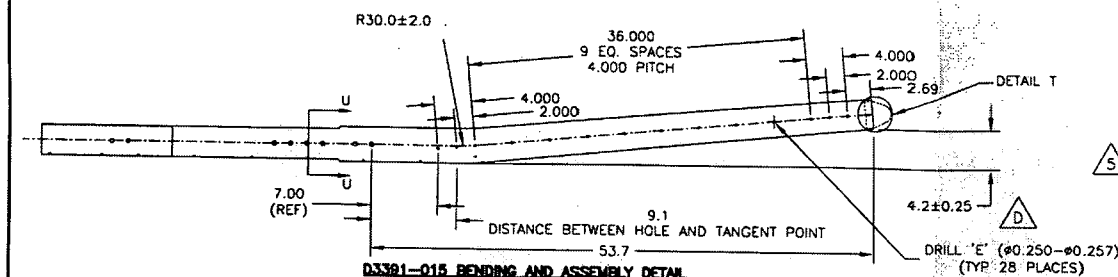
RELEASED
06-01-23

NO. 26573
WORK ORDER
SUBJECT TO AMENDMENT
WITHOUT NOTICE
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY
NO. 26573



COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.		DESIGN PH	DRAWN BY PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		CHECKED #	APPROVED #	DRAWING NO. D3391	REV. D SHEET 4 OF 5
DATE 06.01.23		TITLE 412 FLOAT SKIDTUBE		SCALE 1:12	

RELEASED
06.01.27

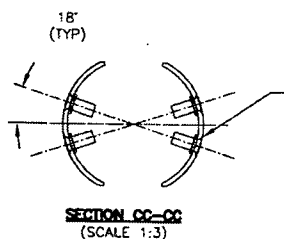
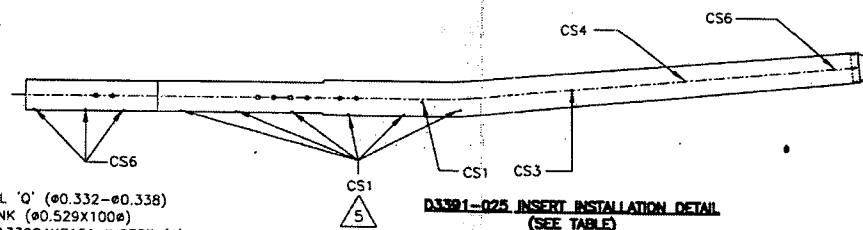
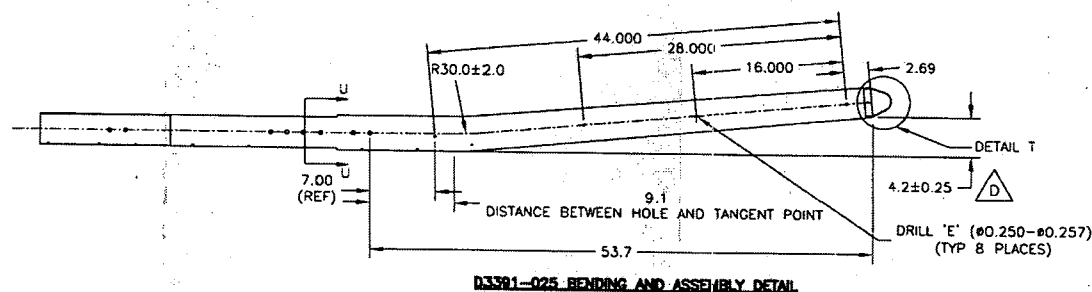


C'SINK AND INSTALL AESS10KBXXX AND/OR NAS1330C3KBXXX IN HOLES MARKED CS1-CS6 AS FOLLOWS

HOLES MARKED	QTY D3391-015	QTY D3391-025	C'SINK	P/N
CS1	16	14	Ø0.425	AESS10KB366
CS2	4		Ø0.391	AESS10KB366
CS3	4	2	Ø0.391	NAS1330C3KB316
CS4	4	2	Ø0.391	NAS1330C3KB266
CS5	4		Ø0.391	NAS1330C3KB216
CS6	12	8	Ø0.391	NAS1330C3KB166

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
18	14	AESS10KB366	INSERT
4	2	NAS1330C3KB316	INSERT
4	2	NAS1330C3KB266	INSERT
4		NAS1330C3KB216	INSERT
12	8	NAS1330C3KB166	INSERT
4		NAS1330C4KB151	INSERT
2	2	AN3C4A	BOLT
2	2	NAS1515H3L	WASHER
2	2	AN960C10L	WASHER



DRILL 'O' (Ø0.332-Ø0.338)
C'SINK (Ø0.529X100°)
NAS1330C4KB151 INSERT (1)
(4 PLACES)

COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

DESIGN PH	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HANCOCK, ME	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3391	REV. D SHEET 5 OF 5
DATE 06.01.23	TITLE 412 FLOAT SKIDTUBE	SCALE 1:12	

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
NO 26572
WORK ORDER
ENGINEERING
RETURN TO
SHOP COPY